

V2020 FISCAL RESOURCES TASK GROUP
Meeting Minutes 10/18/12

ATTENDEES: Gordon Jamieson (CoChair), David Garbarino (CoChair), Heather Remoff, Solar Coach Ryan Katofsky, Pete Howard (Secretary),

Gordon announced that David has agreed to cochair the Task Group.

MY TAX DOLLARS: Gordon is expecting a call from the Deputy Town Manager.

MTG w/ DPW DEPARTMENT HEAD: Gordon & Scott are arranging.

SOLAR POWER FOR TOWN BUILDINGS: Ryan, using a handout (Ref 1), reviewed the small system now installed on Ottoson and the plans being made by the Manager's Energy Working Group to install on 9 other buildings (schools represent the low hanging fruit in this regard). The plan is to employ power purchase agreements (PPAs). Under a PPA, the Town would hire a solar power company to install & run the system on a building. The company would sell the solar power generated to the Town at a guaranteed rate lower than the utility charges. The company would sell excess power to the utility, and would collect the incentives. It would also maintain the equipment. The PPA would have a long term, maybe 20 years. Thompson will be built to accommodate solar power. Ryan estimates (crudely) an annual saving at \$.05/kWh of \$180k. The School's CFO (member of EWG) is supportive. Ryan answered numerous questions. Gordon offered our support if needed. Ryan sees no need to involve Town Meeting since no bylaw, budget or capital expense is required.

DEVELOPMENT ON MASS AVE: Pete, using a draft memo (Ref 2) sent to members, discussed his analysis of the assessment data provided last spring by the Town Manager. The data was for Mass Ave in East Arlington & Mass Ave in North Cambridge. After what he believes was a careful review of this data and contrary to one's impression gained by driving through these 2 areas, the annual increase in Arlington was a little more than in Cambridge. This may be caused by the Cambridge data containing only commercial properties while Arlington data included all properties. During discussion several corrections were suggested. In addition, Gordon suggested using the Arlington data alone to show the relative value on mixed use property compared to other uses. Pete will revise the memo accordingly.

NEXT MEETINGS . 11/15/12 Third Thursdays in Senior Center 2nd Floor Conference Room

Ref 1 Solar Power Systems On Town Buildings

Ref 2 Development on Mass Ave-East Arlington vs North Cambridge



**Sustainable
Arlington**
MASSACHUSETTS

Ref 1

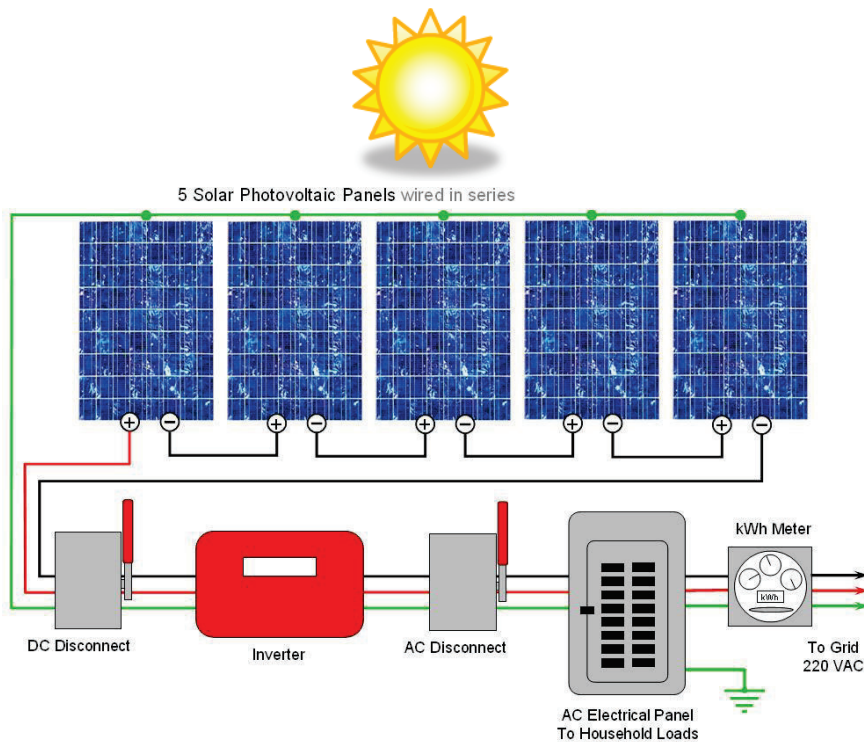
Town of Arlington Activities to Install Solar Power Systems on Town Buildings

*Presentation by Ryan Katofsky to the Fiscal Resources Task Group of
Vision 2020*

October 18, 2012

What is PV (photovoltaics)?

- PV converts sunlight directly to electricity without moving parts or pollution.

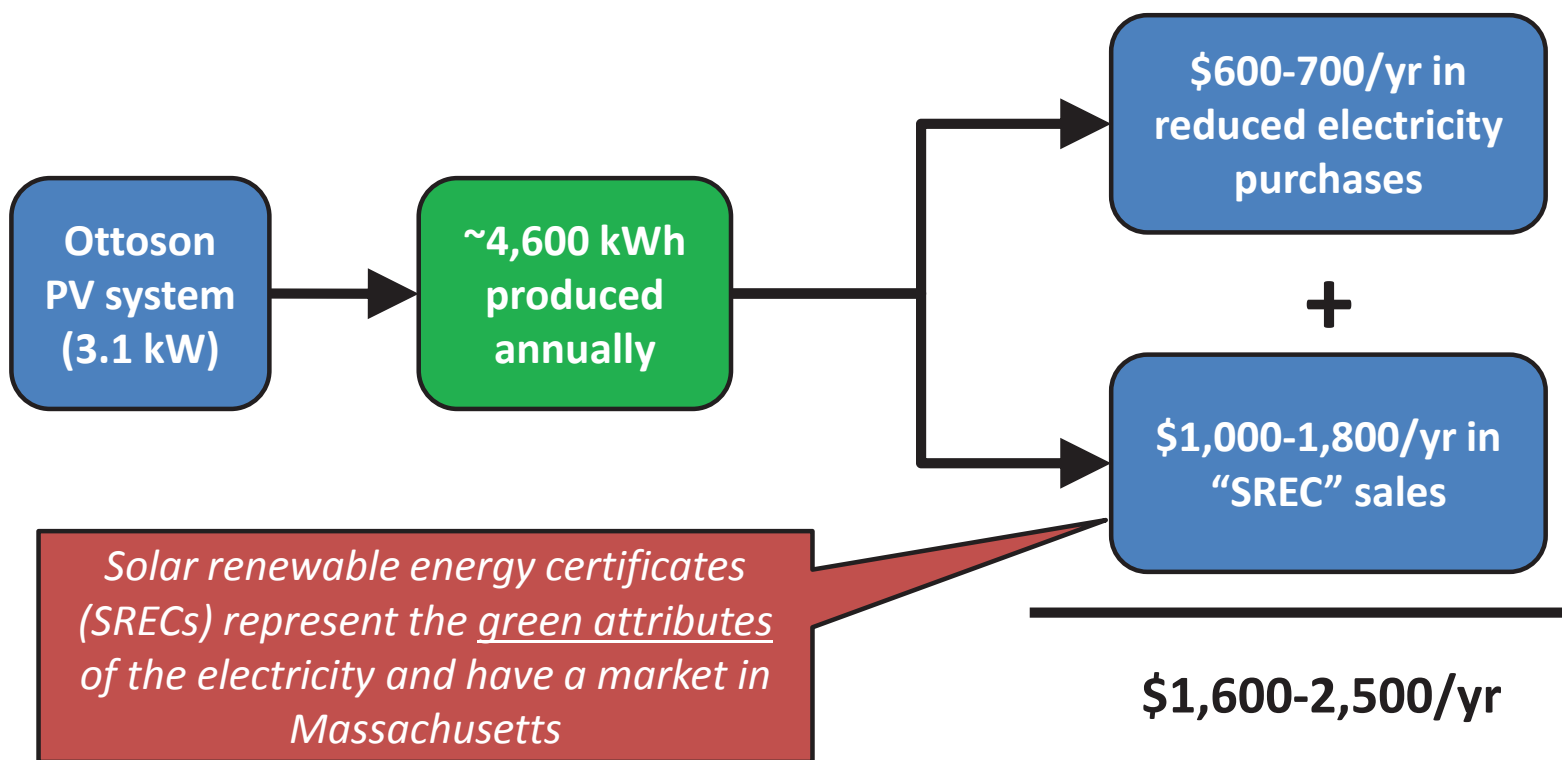


Ottoson PV array being installed, spring 2011.



http://www.creategreenhome.com/Solar_Photosvoltaic_System.htm

In Massachusetts, PV systems produce cost savings and revenue.



Note: All energy production and cost savings figures are estimates. Actual amounts will depend on actual generation, electricity prices and SREC prices.

We are developing plans for larger PV deployment.

- The Energy Working Group is developing a plan to expand solar electricity generation on Town buildings
- Schools, in particular, are well suited for PV
 - Large flat roofs (many roofs are also new)
 - Few obstructions, minimal shading (usually)
- Solar “PPA” (power purchase agreement)
 - An private company owns, finances, installs and maintains the system
 - Necessary, since many incentives are tax-based
 - The Town purchases the electricity from them instead of from its electricity supplier*
 - Federal and state incentives for PV mean that **solar electricity is cheaper than grid power**
 - There is zero price risk
- New Thompson school will be “solar ready” (maybe first site for large array?)

* The PV systems would not meet 100% of the building’s electricity needs. The Town would continue to purchase some electricity from its existing suppliers.

Some issues to consider.

- Technical
 - Roof age and condition
 - Roof loading
 - Renovation/reconstruction plans
- Environmental
 - In rough terms, every 1 kW of PV offsets about 1,000 lb of CO₂ per year
 - Roughly equal to driving 1,500 miles (at 30 MPG)
- PV helps us meet our 20% energy reduction goals under the green communities program.

Peirce is a good example of a suitable roof.



AHS, while much larger, would pose more challenges.



Ryan's ballpark* savings estimates for widespread PV deployment.

	Approximate roof area (square feet)	Theoretical PV potential (kW)	Theoretical Annual Generation (kWh)
Brackett Elementary School	26,000	260	296,088
Dallin Elementary School	29,000	290	330,252
51 Grove Street	6,500	65	74,022
Former Gibbs School	21,000	210	239,148
Hardy Elementary School	17,000	170	193,596
Arlington High School	120,000	1,200	1,366,560
Ottoson Middle School	65,000	650	740,220
Peirce Elementary School	16,000	160	182,208
Stratton Elementary School	18,000	180	204,984
Total	318,500	3,185	3,627,078

Assumed savings of 5¢ per kWh equals annual savings of \$181,354

* Very rough estimates. Do not use for planning purposes.

Questions?

Ryan Katofsky
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From: Pete Howard
 To: Fiscal Resources Task Group (FRTG) of Vision 2020
 Subject: Development on Mass Ave - East Arlington vs North Cambridge
 Date: 10/18/2012

Background: In late 2011 the Planning Department began to develop a Master Plan to guide development in Arlington. The FRTG discussed ways we might contribute. Gordon Jamieson observed that Mass Ave in East Arlington seems to be much less developed than the section of Mass Ave in Cambridge just over the Town line in North Cambridge. Much of this development seemed to have taken place in recent years. With the FRTG's encouragement he asked the Town Manager, Adam Chapdelaine for assessment records from both communities to see if the difference could be quantified. If this difference turned out to be substantial, it would be a strong reason to encourage similar development in Arlington. The tax revenue from such development might reduce the structural deficit which puts such pressure on Town finances.

Data: In the spring of 2012, the Town Manager provided two Excel files containing the requested data and more. The Arlington file contains assessment records and GIS locations for all properties on Mass Ave from Pleasant St (Rt 60) to Alewife Brook (Rt16). It also contained the same information for Broadway from Broadway Plaza to Rt 16. There are 564 records in all. Each record includes data for the years 2003 to 2011. The Cambridge file contains similar but somewhat less complete records covering the years 2001 to 2011. It contains only 257 commercial properties, not all of which are on Mass Ave. The Mass Ave properties are between Rt 16 through Porter Square. It covers the years 2001 to 2011.

Initial Analysis: The Town Manager provided a map (Figure 1) showing the change in assessed value (2011-2003) for each property over the period covered by the data. The properties which change in land use code were marked. By this measure, most of the properties in Arlington showed an increase in assessed value ranging from 25% to 75%. Most of the properties in Cambridge showed little or no increase in value. The FRTG found this result surprising. I decided to look at the data more closely.

Data Filtering: My first step was to extract the Mass Ave properties in Arlington and to delete the 13 church or government owned parcels according to the Land Use Code (LUC). In the case of the 4 closed parcels, I combined all the parcels that replaced the closed parcel to provide a complete assessment history of that location. I treated the Broadway properties the same way. The Cambridge file had some entries which didn't make sense. I dropped these parcels along with the parcels not on Mass Ave. In all cases I dropped the data for 2011 because it was the same as the data for 2010. Figure 2 lists all data processing steps.

Results:

Total Assessments: I added the assessments of all parcels in each grouping for each year from 2003 through 2010. The results, Figure 3, show a steady increase in Arlington of more than 5%/year for Mass Ave and a much slower increase of less than 2%/year for Cambridge. The Cambridge assessments seem to change only when the LUC changes, for example by condo-izing. The approximate annual tax increase was \$86k for Arlington and \$63k for Cambridge. This more detailed look at the data shows that the initial analysis was misleading. Over all the assessment values for both communities did increase though more in Arlington than in Cambridge. But still these numbers are very small given our structural deficit of several million dollars.

Distribution of Assessments on Mass Ave in Arlington: I investigated the number of parcels with low assessments compared with those with high assessments to see if most of the increase was at the low or high end of the scale (Figure 4). Most of the 181 parcels were assessed at less than \$1m. Over the 8 year period the numbers in the lower categories decreased and the numbers in the higher categories increased but there is considerable bouncing around in between. The number of properties assessed at more than \$1m increased rather steadily from 19 to 28. This group probably accounts for most of the growth.

Distribution of Assessments, Arlington vs Cambridge, in 2011: I show the % of parcels in each assessment value category in Figure 5 for both communities. There is a striking difference. A much larger portion of the Arlington parcels are in the lower value bracket. This is probably because only Arlington data includes the non-commercial parcels. But a much smaller portion of the Arlington parcels, 1/3 as many, are in the over \$1m bracket. This supports the original idea that it might be possible to attract high value redevelopment to Arlington.

Assessment Value of Arlington Parcels by Land Use Codes in 2011 The Arlington data includes LUCs for each parcel. Figure 6 shows that most of the increase in value over the 8 year period was in residential/commercial (mixed use) properties. Also note the large hotel assessment increase in 2009. The value of residential properties increased dramatically from 2003 to 2007 but then leveled off.

Conclusion: This interesting data set shows that on Mass Ave, North Cambridge has attracted more high value properties than East Arlington but that the total assessments are similar though the rate of increase is greater in East Arlington. The potential tax revenue increase seems to be modest.

References

- 1 Initial Analysis
- 2 Data Processing Steps
- 3 Total Assessment History
- 4 Assessment Distribution History Mass Ave Arlington
- 5 Assessment Distribution 2011 Arlington vs Cambridge
- 6 Assessment History In Arlington by Land Use Code